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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/980,541 | 02/14/2002 | Mikko Puuskari | 60282.00449 | 3914 |

32294 7590 04/06/2007
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| EXAMINER |
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JUNTIMA, NITTAYA

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| ART UNIT | PAPER NUMBER |
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2616

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 04/06/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/980,541 | PUUSKARI ET AL. | |
| | Examiner | Art Unit | |
| | Nittaya Juntima | 2616 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 is/are allowed.
- 6) ☒ Claim(s) 7-10, 20, 27 and 28 is/are rejected.
- 7) ☒ Claim(s) 11-19, 21-26 and 29-43 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the RCE filed on 12/12/2006.
2. Claims 1-43 are pending.
3. Claims 1-6 are allowed.
4. Claims 11-19, 21-26, and 29-43 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. Claims 7-10, 20, 27, and 28 remain rejected under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 7-10, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over an admitted prior art, "*3rd Generation Partnership Project; Technical Specification Group Services and System Aspects, QoS Concept*" (hereafter "3GPP").

Regarding claims 7 and 20, 3GPP teaches a method for transmission of data packets in a packet data network, said method comprising the steps of:

Detecting at least a delivery order attribute (Delivery order) as a parameter set for a transmission protocol type used for transmission of data packets (since a Delivery order is

Art Unit: 2616

derived from the user protocol, PDP type, it must be a parameter set for the PDP type; page 17, lines 21 of section 6.4.2.1 -page 18, lines 1-4, and since the UMTS BS manager in the MT, CN EDGE, and the Gateway modify the UMTS bearer service which includes the DOA as its attributes, page 13, lines 9-31 of section 6.2.2.1, and page 17, section 6.4.2.1, the DOA must be detected by the UMTS BS manager in the MT, CN EDGE, and the Gateway).

Deciding whether said delivery order attribute parameter is set for said protocol type (3GPP also teaches that the Delivery order is derived from PDP type indicating “y” for out-of-sequence is not acceptable or “n” for out-of-sequence is acceptable, page 17, lines 21 of section 6.4.2.1-page 18, lines 1-4, therefore, the step of deciding whether the Delivery order is set to “y” or “n” for the PDP type must be included after the Delivery order is derived from the PDP type).

Determining a traffic class (Traffic class) of the transmitted data packets (the Traffic class as part of the UMTS bearer service attributes must be determined in order for the UMTS to optimize the transport for that traffic type, page 17, lines 5-8 of section 6.4.2.1).

Processing the transmitted data packets dependent on the determined traffic class if the delivery order parameter is set (optimizing the transport for the traffic according to the specified Traffic class must be carried out according to Delivery order set as “y” or “n,” page 17, lines 5-8 of section 6.4.2.1, see also Table 1 on pages 16-17).

Accordingly, 3GPP teaches the detecting, the deciding, determining, and processing steps. However, 3GPP fails to teach which step to be performed first, i.e. the step of deciding if the delivery order attribute is set is performed prior to carrying out the determining and processing steps as recited in the claims.

It would have been obvious to one skilled in the art at the time of the invention was made to modify the teaching of 3GPP to include the step of deciding, whether said delivery order attribute parameter is set; and then perform the determining and processing steps as recited in the claims. Such modification is a decide choice and involves only arranging of the method steps such that if it is decided that the Delivery order attribute is set to “y” (or set to “n”), then the Traffic class would be determined and traffic would be processed, respectively. The motivation/suggestion to do so would have been to enable a packet processing device to allocate appropriate resources, such as buffer space and processing power, immediately after deciding that the delivery order attribute is set in order to enhance the robustness and efficiency of the system.

Regarding claim 8, 3GPP teaches if said delivery order attribute (Delivery order) is set, this indicates that the order of transmitted data packets is to be maintained (Delivery order is set to “y” for out-of-sequence is not acceptable, page 17, lines 21 of section 6.4.2.1-page 18, lines 1-4).

Regarding claim 9, 3GPP teaches if said delivery order attribute (Delivery order) is not set, this indicates that the order of transmitted data packets does not need to be maintained (Delivery order is not set to “y”, i.e. is set to “n” for out-of-sequence is acceptable, page 17, lines 21 of section 6.4.2.1-page 18, lines 1-4).

Regarding claim 10, 3GPP does not teach that the data packets are to be transmitted and forwarded to their destination immediately and irrespective of the traffic class.

However, since 3GPP points out that the Delivery order cannot be extracted from (i.e. independent of) the traffic class (page 18, lines 2-4), therefore, it would have been obvious to

Art Unit: 2616

one skilled in the art to modify the teaching of 3GPP to include that the data packets are to be transmitted and forwarded to their destination immediately and irrespective of the traffic class when the Delivery order is not set to 'y' (i.e. the Delivery order is set to "n" for out-of-sequence is acceptable, page 17, lines 21 of section 6.4.2.1-page 18, lines 1-4). The motivation/suggestion to do so would have been to enable out-of-sequence SDUs to be dropped as specified, thereby reducing transmission/processing delay.

8. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over an admitted prior art, "*3rd Generation Partnership Project; Technical Specification Group Services and System Aspects, QoS Concept*" (hereafter "3GPP") in view of another admitted prior art, the Background of the Invention section of the specification.

Regarding claims 27 and 28, although 3GPP teaches the UMTS control plane with MT, CN EDGE, and the Gateway (page 13, lines 1-17 of section 6.2.2.1) and UMTS-GPRS Interworking relation (page 24, section 9 and page 25, lines 1-6 of section 9.1.2), 3GPP fails to explicitly teach that the network element is a RNC in controlling the transmission of data packets in a packet data network in downlink direction and a GGSN in uplink direction as recited in the claims.

However, the Background of the Invention section of the specification teaches that the RNC controls the forwarding of data packets in the downlink direction, while in the uplink direction the GGSN controls the forwarding of data packets to external network as the destination (page 3, lines 7-10).

Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to include the RNC and the GGSN into the teaching of 3GPP as recited in the claims.

The motivation/suggestion to do so would have been to provide the connection between the UMTS network and the external network via the GGSN as taught by the Background of the Invention section of the specification (page 2, lines 23-page 3, lines 5).

Response to Arguments

9. Applicant's arguments filed 12/13/2006 have been fully considered but they are not persuasive.

In the remarks regarding claims 7 and 20; the applicant argues that the admitted prior art "3GPP" or "TR 23.907" fails to teach the use of the delivery order attribute (DOA) in the claimed manner and TR 23.907 fails to teach or suggest the detecting, deciding, and determining steps associated with a delivery order parameter recited in claims 7 and 20.

In the response, TR 23.907 clearly teaches the steps of detecting, deciding, determining, and processing associated with a delivery order parameter as follows:

Regarding claims 7 and 20, 3GPP teaches a method for transmission of data packets in a packet data network, said method comprising the steps of:

Detecting at least a delivery order attribute (Delivery order) as a parameter set for a transmission protocol type used for transmission of data packets (since a Delivery order is derived from the user protocol, PDP type, it must be a parameter set for the PDP type; page 17, lines 21 of section 6.4.2.1 -page 18, lines 1-4, and since the UMTS BS manager in the MT, CN EDGE, and the Gateway modify the UMTS bearer service which includes the DOA as its attributes, page 13, lines 9-31 of section 6.2.2.1, and page 17, section 6.4.2.1, the DOA must be detected by the UMTS BS manager in the MT, CN EDGE, and the Gateway).

Art Unit: 2616

Deciding whether said delivery order attribute parameter is set for said protocol type (3GPP also teaches that the Delivery order is derived from PDP type indicating “y” for out-of-sequence is not acceptable or “n” for out-of-sequence is acceptable, page 17, lines 21 of section 6.4.2.1-page 18, lines 1-4, therefore, the step of deciding whether the Delivery order is set to “y” or “n” for the PDP type must be included after the Delivery order is derived from the PDP type).

Determining a traffic class (Traffic class) of the transmitted data packets (the Traffic class as part of the UMTS bearer service attributes must be determined in order for the UMTS to optimize the transport for that traffic type, page 17, lines 5-8 of section 6.4.2.1).

Processing the transmitted data packets dependent on the determined traffic class if the delivery order parameter is set (optimizing the transport for the traffic according to the specified Traffic class must be carried out according to Delivery order set as “y” or “n,” page 17, lines 5-8 of section 6.4.2.1, see also Table 1 on pages 16-17).

Accordingly, 3GPP teaches the detecting, the deciding, determining, and processing steps. However, 3GPP fails to teach which step to be performed first, i.e. the step of deciding if the delivery order attribute is set is performed prior to carrying out the steps of determining and processing as recited in the claims.

Note that the claims do not specify *what the delivery order attribute parameter is set, who/how is it set, and what happens if the delivery order parameter is not set*, and since the DOA is independent of the traffic type as stated by the TR 23.907 and agreed upon by the applicant (Remarks, page 12, lines 4-5), therefore, TR 23.907 teaches the steps of deciding and processing as claimed.

Art Unit: 2616

The only difference between the teaching of TR 23.907 and claims 7 and 20 is that TR 23.907 fails to explicitly teach which step to be performed first, i.e. the step of deciding if the delivery order attribute is set is performed prior to carrying out the determining and processing steps as recited in the claims.

However, it would have been obvious to one skilled in the art at the time of the invention was made to modify the teaching of TR 23.907 to include the step of deciding, whether said delivery order attribute parameter is set; and then perform the determining and processing steps as recited in the claims. Such modification is a decide choice and involves only arranging of the method steps such that if it is decided that the Delivery order attribute is set to “y” (or set to “n”), then the Traffic class would be determined and traffic would be processed, respectively. The motivation/suggestion to do so would have been to enable a packet processing device to allocate appropriate resources, such as buffer space and processing power, immediately after deciding that the delivery order attribute is set in order to enhance the robustness and efficiency of the system.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 571-272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nittaya Juntima

April 2, 2007



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